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Images in Conginital Cardiac Disease

Asymptomatic anomalous right coronary artery from the pulmonary trunk

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A 7 YEAR OLD BOY WAS EVALUATED FOR AN asymptomatic cardiac murmur following a confirmed streptococcal infection. On physical examination, he had a continuous murmur with high frequency heard along the left upper sternal border, but no other abnormal findings. The 15 lead electrocardiogram (Fig. 1) demonstrated normal sinus arrhythmia, without evidence of atrial or ventricular enlargement. Due to the character of the cardiac murmur, complete transthoracic echocardiogram was performed. On colour Doppler imaging in the modified apical four chamber view (Fig. 2), we

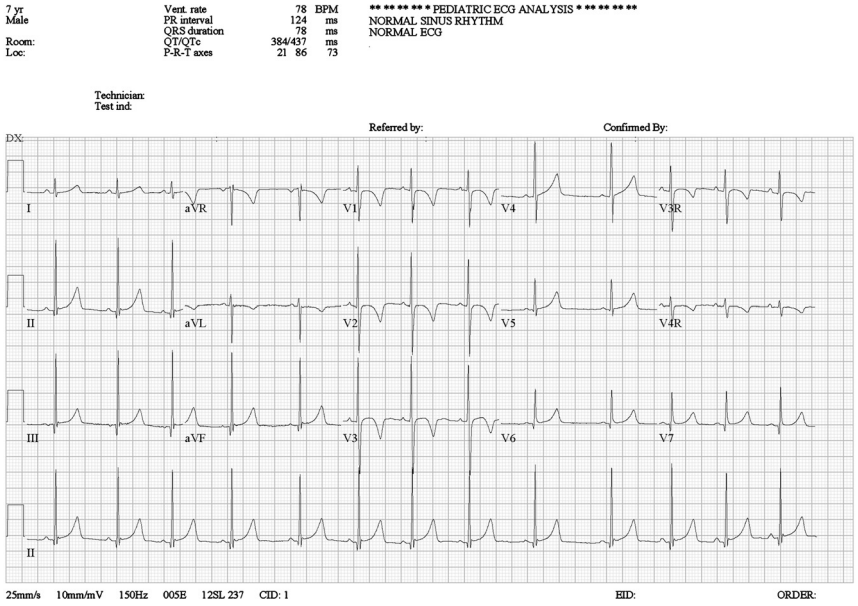

Figure 1.

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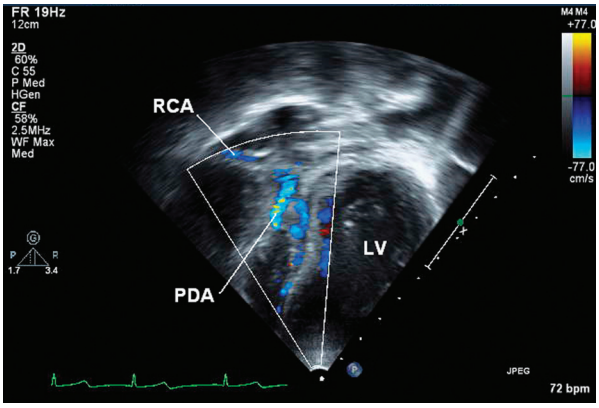

Figure 2.

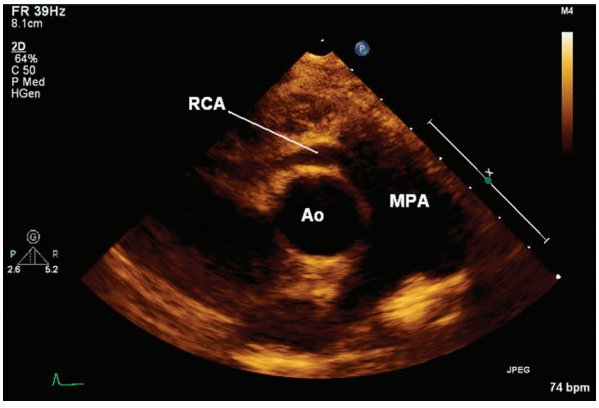

Figure 3.

noted retrograde flow in the inferior interventricular (PDA) and right coronary (RCA) arteries (LV = left ventricle). The parasternal short axis views (Figs. 3 and 4) confirmed anomalous origin of a dilated right coronary artery (RCA) from the pulmonary trunk (MPA), as well as enlargement of

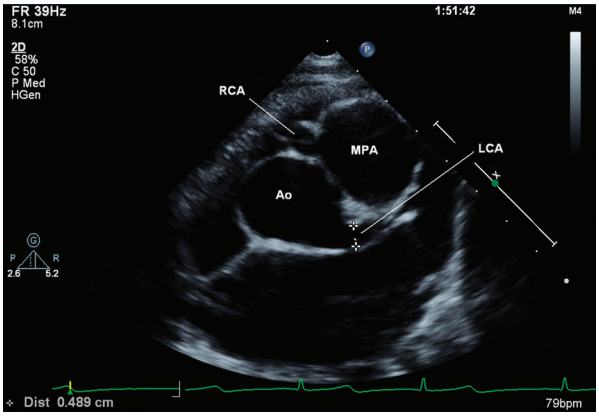

Figure 4.

the main stem of the coronary artery (LCA), which arose normally from the aorta (Ao).

Since its original description by Brooks in 1885, approximately 70 cases of anomalous origin of the right coronary artery from the pulmonary trunk have been documented in the English literature.[1] Most patients without other associated cardiac lesions presented, as did our patient, with an asymptomatic cardiac murmur. In those older than 40 years, presentation was increasingly due to cardiac failure and/or angina. Angina was rarely seen in those presenting before 20 years of age. Sudden death and cardiac arrest were documented at all ages. Based on these considerations, surgical correction, either by aortic reimplantation or ligation, probably should be advised in all patients.

Reference

1. Williams IA, Gersony WM, Hellenbrand WF. Anomalous right coronary artery arising from the pulmonary artery: a report of 7 cases and a review of the literature. Am Heart J 2006; 152: 1004.e9–1004.e17.

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